ABSTRACT OF THE DISCLOSURE

An optical switch ideally suited for use as an optical add drop multiplexer (OADM). A light beam entering the OADM through a first input fiber (402) is separated by wavelength to yield multiple light beams (902, 904). One light beam (902) is reflected by one or more of the mirrors in mirror array (908). Depending on the position of the mirrors struck by light beam (902), the beam is reflected to a first region of a retro-reflector (910) or a second region (912). When light beam (902) is reflected by the second region (912) of the retro-reflector, it again travels to the mirror array (908) and is then reflected to a wavelength combiner (914) and output on the second ("drop") output fiber (408). While a first wavelength light beam (902) is reflected to the drop output (408), other wavelengths of light from the first input (402), for example light beam (904), are directed to the "out" optical fiber (406). A first group of mirrors (914) in the array (908) are thus used selectively to switch various wavelengths of the input optical signal to either the "out" optical fiber (406) or the "drop" optical fiber (408). Another group of mirrors (914) works cooperatively with the first group to direct light beams destined for the "drop" output fiber (408) to the wavelength combiner associated with the "drop" output. Other groups of mirrors operate to switch various wavelengths from the second input (404), the "add" fiber, to the first output "out."